

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A clock, with a mechanical, electrical or electronic motor, with analog and unambiguous 24 hour display, with at least one indicating element for the hours, ~~which is driven by an hour tube (18), characterised in that~~ the clock comprising:

~~[[- the]]~~ at least one indicating element (5) for the hours being driven by an hour tube and running ~~runs~~ around a ~~two-loop closed curve (7, 31), called a~~ first conchoid; ~~or Pascal snail, of which~~

wherein each point is touched exactly once in 24 hours by the indicating element (5), whereby the ~~said curve (7, 31)~~ first conchoid has an outer loop (8, 40) and an inner loop ((9, 41) with a crossing point (42) of the inner loop and the outer loop; and two loops (8, 40; 9, 41),

~~[[-]]~~ guiding means are present to guide for guiding the at least one indicating element (5) along the first conchoid. ~~said two-loop curve (7, 31),~~

~~—the angular position of the indicating element (5) with regard to the null points of time at 12 h and 24 h is that as in known clocks.~~

2. (Currently Amended) A clock according to Claim 1, ~~characterised in that~~ wherein [-] the guiding means by which the indicating element is guided along the said two-loop curve (7, 31) comprise the following elements, comprises:

[-] a groove, at least indirectly connected to ~~the~~ a dial (24), which is also wherein the groove is formed as a ~~two-loop closed curve in the shape of a~~ second conchoid; (10);

[-] a guiding element (12, 17), ~~which can move~~ for moving along in the said second conchoid, (10) ~~and carries the guiding element carrying a guide pin; (21);~~

[-] an element (11, 14) ~~firmly fixed to the~~ an hour tube (18), ~~which moves the element moving~~ the guiding element (12, 17) in the second conchoid (10) at least indirectly[[,]]; and

~~an wherein the~~ indicating element (13), ~~which~~ is moved in a radial direction by the guide pin (21), and in the azimuthal direction by the element (11, 14) ~~firmly~~ fixed to the hour tube (18).

3. (Currently Amended) A clock according to Claim 2, ~~characterised in that wherein the~~ indicating element comprises: ~~a variable length hour hand (5) is present with~~
 an inner part (14) ~~and an outer part (13), whereby, wherein the inner part (14) can be is~~
 joined to the element ~~firmly~~ joined to the hour tube; and (18);

~~[[-]] an the outer part (13) of the hour hand (5) can be, wherein the outer part is slid in a~~
 radial direction relative to the inner part (14) and is moved by it the guide pin in an azimuthal
 direction, wherein ~~[[-]] the radial movement of the outer part (13) of the hour hand (5) is caused~~
~~by the guide pin (21), which is at least indirectly in connection with the said outer part (13);~~
~~the indicating element is the point of the outer part (13) of the hour hand (5).~~

4. (Currently Amended) A clock according to Claim 3, ~~characterised in that wherein the~~
 guiding element, ~~which carries the guide pin (21), is a sickle shaped sliding element (12), which~~
~~can move moving~~ azimuthally with radial play in the ~~groove formed second~~ conchoid (10);
 whereby;

wherein an outer radius of curvature of the sickle shaped sliding element (12) is smaller
 than ~~the a~~ smallest radius of curvature of ~~the an~~ outer surface of the ~~groove shaped second~~
 conchoid (10), and wherein an ~~the~~ inner radius of curvature of the sickle shaped sliding element
 (12) is greater than ~~the a~~ greatest radius of curvature of ~~the an~~ inner surface of the ~~groove shaped~~
second conchoid (10).

5. (Currently Amended) A clock according to Claim 3, ~~characterised in that~~ wherein:

[[-]] the guiding element, which carries the guide pin, ~~(21) is a guiding element (17) with~~ includes at least three wheels ~~(26, 27, 28)~~ with parallel axles perpendicular to ~~the~~ a plane of the dial; ~~(24),~~

the guiding element includes with two arms ~~(29), further and~~ a carrying member ~~(25) is~~ present, in which the at least three said wheels ~~(26, 27, 28)~~ are mounted; ~~whereby~~

each of the two arms ~~(29)~~ carries one of the at least three wheels ~~wheel (26, 28), and the~~ a third of the at least three wheels ~~wheel (27) is mounted between the~~ a first and second of the at least three ~~two~~ wheels ~~(26, 28)~~ in the carrying member; ~~(25),~~

[[-]] the at least three wheels ~~(26, 27, 28)~~ are arranged behind one another in the direction of the track of the second conchoid ~~(10)~~, so that the first and the second wheels ~~third wheel (26, 28)~~ can touch the inner surface of the second conchoid ~~(10)~~ and the ~~centre~~ third wheel ~~(27)~~ touches the outer surface of the second conchoid; ~~(10),~~

[[-]] the at least three wheels ~~aforsaid~~ are further arranged so that, ~~both at the~~ a position in the second conchoid ~~(10)~~ with the greatest radius of curvature[[,]] and ~~also in that~~ a position in the second conchoid with the smallest radius of curvature, sufficient radial play is available so as to facilitate ~~easy aximuthal~~ azimuthal movement of the guiding element; ~~and (17),~~

[[-]] the guide pin ~~(21)~~ is arranged in ~~the~~ a region of the ~~centre~~ third wheel ~~(27).~~

6. (Currently Amended) A clock according to Claim 5, ~~characterised in that of~~ wherein at least one of the two arms ~~(29)~~ between the ~~centre~~ third wheel ~~(27)~~ and the ~~outer~~ first and second wheels ~~(26, 28)~~ at least one is produced as a flexing spring ~~(30)~~ working in a radial direction.

7. (Currently Amended) A clock according to Claim 1, ~~characterised in that~~ wherein the guiding means ~~for guiding the indicating element on the said two loop curve (7, 31),~~ comprise comprises a plurality of gear wheels and a plurality of ~~the~~ arms ~~necessary to carry them~~ the plurality of gear wheels.

8. (Currently Amended) A clock according to Claim 7, ~~characterised in that~~ wherein ~~[[-]]~~ the guiding means ~~for guiding the indicating element on the said two loop curve (7, 31),~~ comprise the following elements, comprises:

~~[[-]]~~ a first gear wheel (A), with radius $r(A)$, ~~which is~~ arranged concentrically with the hour tube (18) with radius $r(18)$ and the first gear wheel is ~~firmly~~ connected at least indirectly to the dial; (24),

~~[[-]]~~ a first arm (32) ~~firmly~~ connected to the hour tube (18) and extending outwards, wherein ~~in which~~ a first axle (36) of a second gear wheel (B) with radius $r(B)$ is rotatably mounted to the first arm; ~~[[,]]~~

~~[[-]]~~ the second gear wheel (B) lies in the same plane as the first gear wheel (A) and meshes with the first gear wheel; ~~it;~~

~~[[-]]~~ a third gear wheel (C) with radius $r(C)$ ~~is present and~~ arranged concentrically with the second gear wheel (B) and ~~is firmly~~ connected to the first arm (32), wherein a second arm (34) is ~~present and similarly~~ fastened to the second gear wheel (B) on the same axle; ~~[[,]]~~

~~[[-]]~~ a fourth gear wheel with radius $r(D1)$ ~~is present, which lies~~ the fourth gear wheel lying in the same plane as the third gear wheel (C) and the third gear wheel meshes with the fourth gear wheel ~~it;~~

[[-]] the fourth gear wheel (D1) is fastened on ~~an~~ a second axle (33) running parallel to the first axle (36), ~~which , wherein the fourth gear wheel~~ is mounted rotatably in the second arm; (34);

[[-]] the second arm (34) carries ~~an~~ a third axle (35) at a distance d(E) from the first axle (36), ~~to which it , wherein the second arm~~ is fastened to the third axle and the third axle runs, running parallel to the first axle; it;

[[-]] a fifth gear wheel (E) ~~is present, which can rotate~~ rotatable about the ~~last named~~ third axle (35) and at a distance d(F) from ~~this carries~~ the third axle the guide pin (21) ~~is~~ arranged parallel to the third axle; it;

[[-]] a sixth gear wheel (D2) with radius r(D2) ~~is present, which is~~ arranged in the same plane as the fifth gear wheel (E) and the fifth gear wheel meshes with the sixth gear wheel, ~~wherein it, whereby~~ the sixth gear wheel (D2) is fastened on the ~~same~~ second axle (33) ~~as the fourth gear wheel (D1), and the sixth gear wheel is~~ coaxial with fourth gear wheel; and it;

[[-]] the following relationships apply for the radii r(A), r(B), r(c), r(D1), r(D2):

$$r(B) = 2r(A)$$

$$r(C) = 2r(D1)$$

$$r(E) = r(D2).$$

9. (Currently Amended) A clock according to Claim 8, ~~characterised in that~~ wherein:

[[-]] the crossing point (42) ~~of the two loops (40, 41) of the two loop curve (31)~~ has a distance d(31) from ~~the centre~~ a center of the hour tube (18) ~~whereby~~ wherein

$$r(A) + r(B) = d(31)$$

applies[[,]];

[[-]] ~~the~~ a greatest radial distance of each of the inner loop and outer loop two loops (40, 41) ~~of the two loop curve (31)~~ amounts to d(40) or d(41) and is connected to the distances d(E) and d(F) in accordance with the following equations:

$$d(E) = d(F)$$

$$d(40) - d(41) = 4d(E)[[,]]; \text{ and}$$

[[-]] the hour tube (18) has an outer radius r(18), which together with r(A), r(B) , and r(C) define the limitation that:

$$r(C) < r(A) + r(B) - r(18).$$

10. (Currently Amended) A clock according to Claim 3 ~~and Claim 7, characterised in that~~ wherein:

[[-]] the element ~~firmly~~ joined to the hour tube (18) is a disc (11) arranged concentrically to the element; it,

[[-]] ~~a variable length hour hand (5) is present with~~ the indicating element includes an inner part (14) and an outer part (13), ~~whereby wherein~~ the inner part (14) ~~can be~~ is joined to the disc; (11);

[[-]] the outer part (13) of the ~~hour hand (5) can slide~~ indicating element slides in relation to the inner part (14) in a radial direction[[,]];

[[-]] the radial movement of the outer part (13) of the ~~hour hand (5)~~ indicating element is caused by the guide pin (21), ~~which wherein the guide pin~~ is in engagement, at least indirectly, with the ~~said~~ outer part; (13);

[[-]] the indicating element is the point of the outer part; and (13) ~~of the hour hand (5);~~

[[-]] the disc (11) is designed such that ~~it can cover the~~ the disc covers components for the guidance of the indicating element (5) ~~lying beneath it.~~

11. (Currently Amended) A clock according to Claim 10, ~~characterised in that~~ wherein the disc (11) has a radially running slit for the guide pin (21).

12. (Currently Amended) A clock according to Claim 9, ~~characterised in that~~ wherein:

[[-]] the indicating element at the position of the guide pin (21) is a marking applied to the gear wheel (E) [[,]]; and

[[-]] the ~~two-loop curve (31), which describes the track of the guid pin (21)~~ second conchoid is as large as the ~~two-loop closed curve (7)~~ first conchoid of the track of the indicating element.